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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,620	11/13/2003	Kenneth J. Wascheck	47317-S6087	2180

20454 7590 08/25/2005

JEFFREY C. LEW  
2205 SILVERSIDE ROAD  
WILMINGTON, DE 19810

EXAMINER
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SPITZER, ROBERT H

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/712,620

Applicant(s)

WASCHECK ET AL.

Examiner

Robert H. Spitzer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/13/03; 3/29/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The drawing figures are objected to because on Fig. 1, there is no "secondary retentate gas 21" thereon, as described on page 7, line 30 of the specification. Further, there are no transfer lines "32" on Fig. 2, as described on page 10, line 9 of the specification.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite because it recites the "retentate gas having composition enriched in methane", which cannot occur when the membrane is recited to be "selectively gas permeable to methane relative to carbon dioxide", as that means that "methane" permeates selectively to "carbon dioxide", and "methane" would then be depleted in the retentate stream. Claim 4 is indefinite because it recites "a plurality of pressure swing adsorption units" without any correlation to "a pressure swing adsorption unit" previously recited in claim 1. Claim 6 is indefinite because in lines 7 and 8, there is no direct antecedent basis for the recitation of "the pressure swing adsorption units". Claim 7 is indefinite because in line 4, there is no direct antecedent basis for the recitation of "the pressure swing adsorption units". Claim 8 is indefinite because step (F) recites that the intermediate mixture will "selectively permeate through the membrane into the permeate chamber", while step (E) recites "a membrane which is selectively gas permeable to methane relative to carbon dioxide", which means that

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methane permeates into the permeate chamber, resulting in inconsistent recitations.

Claim 10 is indefinite because step (ii) recites "causing the retentate gas to selectively permeate through the membrane", however, only some components of such "retentate gas" will permeate, not all of it, and because step (iii) will not occur because of step (F) of claim 8. Claims 2,3,5,9 and 11-13 are indefinite because they depend from the above indefinite claims.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 6 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the disclosure of Doshi (4,645,516), as applied in the Search Report.

6. Claims 6-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the disclosure of FR 2836058, as applied in the Search Report.

7. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the disclosure of Borray et al. (5,727,903), at col. 4, line 18 through col. 10, line 52.

8. The remaining references listed on the PTO-1449, and the art cited on the PTO-892, show art of interest.

9. Applicants' response to this Office action should also include the following editorial changes: page 6, line 26, "he" should be "the"; page 7, line 8, "to" should be "two"; page 7, line 20, "rejects" should be "reject"; page 8, line 15, "mixture," should be

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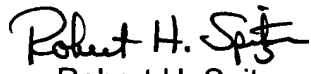
"mixture),"; page 9, line 21, "20" should be "12"; and, page 11, the sentence on lines 11 and 12 is incomplete.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (571) 272-1167. The examiner can normally be reached on Monday-Thursday from (5:30AM-4:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 15, 2005

  
Robert H. Spitzer  
Primary Examiner  
Art Unit 1724

August 15, 2005